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Lyman Leonard Hall

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KASSA, HILINA S

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/680,018	Applicant(s) HALL ET AL.	
	Examiner HILINA S. KASSA	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/14/10</u> . | 6) ☐ Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/2010 has been entered.

Oath/Declaration

2. The Declaration under 37 C.F.R. § 1.132 has been acknowledged.

Response to Arguments

3. Applicant's arguments with respect to claims 17-36 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17, 19-23, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hewitt (US Patent Number 7,016,061 B1), Hattori (US Patent Number 6,369,911 B1) and further in view of Roylance (US Publication Number 2002/0067509 A1).

(1) regarding claim 23:

As shown in figures 1-2, Hewitt disclosed a printing system including a host machine and a printing device (**12, 14, figure 1, column 4, lines 24-27; note that a printing system 10 including a host computer 12 coupled to one or more imaging devices 14 via a communication link 16 is disclosed**), the printing system comprising:

a first software application on the host machine configured to generate page data having a first bit rate per plane per pixel (**column 4, lines 55-57; note that print jobs are originated in an application program resident on host computer 12 i.e. word as explained in figure 3**);

a second software application on the host machine examining the page data in groups of at least two adjacent pixels (**column 4, lines 59-62; note that host computer 12 also includes one or more printer drivers for converting the print job data file to a page description language (PDL) file**);

a print data processor in the host machine configured to render printer ready data based on the examination of the page data (**column 4, lines 62-65; note that a formatter or RIP engine 22 including all the necessary hardware and firmware**

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required to convert a print job PDL file to a hardware ready bits (HRB) file) and,
the second bit rate being lower than the first bit rate (**column 5, lines 34-39; note that**
the PDL file is passed to the RIP engine to be processed i.e. the bit rate is lower
than the PDL data see column 6, lines 30-40) and, a first communication device in the
host machine configured to transfer the interim data (**column 5, lines 34-39; note that**
the print job PDL file is passed to the RIP engine 22, processed and then
transmitted directly to the print engine 26 via I/O communication channels 20);
and a second communication device in the printing device configured to receive the
interim data (**column 6, lines 18-21; note that communication bus 16 facilitates**
transfer of data between host computer 12 and one or more imaging devices 14
on the printing system 10).

Hewitt disclose most of the subject matter as described as above except for
specifically teaching a pulse code generator in the printing device configured to receive
the interim data and configured to generate a pulse code corresponding to the interim
data; and a print engine configured to receive the pulse code and transform the pulse
code to a hardcopy image.

However, as shown in figure 1, Hattori discloses a pulse code generator in the
printing device configured to receive the interim data and configured to generate a pulse
code corresponding to the interim data (**column 3, lines 41-50; note that the pulse**
generator receives the image data and generates the address data for the pixels);
and a print engine configured to receive the pulse code and transform the pulse code to

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a hardcopy image (**column 3, lines 56-60; note that after the pulse generator generates the pulse codes, it is transmitted to the print engine to be outputted**).

Hewitt and Hattori are combinable because they are from the same field of endeavor i.e. processing data for outputting device. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to have a pulse code generator in the printing device configured to receive the interim data and configured to generate a pulse code corresponding to the interim data; and a print engine configured to receive the pulse code and transform the pulse code to a hardcopy image. The suggestion/motivation for doing so would have been to enhance the resolution of an image so that the number of the gray scale levels, which can be expressed, is reduced in inverse proportion to the resolution of the image required to be printed (column 1, lines 14-22). Therefore, it would have been obvious to combine Hewitt and Hattori to obtain the invention as specified in claim 23.

Hewitt and Hattori disclose most of the subject matter as described as above except for specifically teaching configured to combine the printer ready data with print engine control commands operable to control a print engine to create interim data having a second bit rate per plane per pixel.

However, Roylance discloses configured to combine the printer ready data with print engine control commands operable to control a print engine to create interim data having a second bit rate per plane per pixel (**paragraph [0042], lines 6-13; note that the resolution enhancement procedure 122 of figure 1 takes control of the**

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enhancement mode selection before the raster image is sent to the laser print engine i.e. the raster image also contains control information).

Hewitt, Hattori and Roylance are combinable because they are from the same field of endeavor i.e. Multi-level image reproduction (e.g., gray level reproduction). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to configure to combine the printer ready data with print engine control commands operable to control a print engine to create interim data having a second bit rate per plane per pixel. The suggestion/motivation for doing so would have been in order to enhance image processing techniques including resolution enhancement for improving the quality of text and line art, halftone image enhancement for improving the quality of gray value or halftone images and toner conservation for reducing toner consumption (paragraph [0022], lines 3-9). Therefore, it would have been obvious to combine Hewitt and Hattori with Roylance to obtain the invention as specified in claim 23.

(2) regarding claim 26:

Hewitt and Hattori disclose most of the subject matter as described as above except for specifically teaching wherein the print engine control commands are operable to control a print engine in toner miser mode.

However, Roylance discloses wherein the print engine control commands are operable to control a print engine in toner miser mode (**paragraph [0042], lines 20-26;**

note that the toner conservation procedure can reduce toner usage i.e. considered as toner miser mode).

Hewitt and Hattori and Roylance are combinable because they are from the same field of endeavor i.e. Multi-level image reproduction (e.g., gray level reproduction). At the time of the invention, it would have been obvious to a person of ordinary skill in the art wherein the print engine control commands are operable to control a print engine in toner miser mode. The suggestion/motivation for doing so would have been in order to enhance image processing techniques including resolution enhancement for improving the quality of text and line art, halftone image enhancement for improving the quality of gray value or halftone images and toner conservation for reducing toner consumption (paragraph [0022], lines 3-9). Therefore, it would have been obvious to combine Hewitt and Hattori with Roylance to obtain the invention as specified in claim 26.

(3) regarding claim 27:

Hewitt and Hattori disclose most of the subject matter as described as above except for specifically teaching wherein the print engine control commands are operable to control the print engine to perform toner explosion correction.

However, Roylance discloses wherein the print engine control commands are operable to control the print engine to perform toner explosion correction (**paragraph [0007], lines 14-18 and [0008], 1-8; note that the toner that is adhered to the**

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discharged areas is then transferred to the media and fixed in a conventionally known manner).

Hewitt and Hattori and Roylance are combinable because they are from the same field of endeavor i.e. Multi-level image reproduction (e.g., gray level reproduction). At the time of the invention, it would have been obvious to a person of ordinary skill in the art wherein the print engine control commands are operable to control the print engine to perform toner explosion correction. The suggestion/motivation for doing so would have been in order to enhance image processing techniques including resolution enhancement for improving the quality of text and line art, halftone image enhancement for improving the quality of gray value or halftone images and toner conservation for reducing toner consumption (paragraph [0022], lines 3-9). Therefore, it would have been obvious to combine Hewitt and Hattori with Roylance to obtain the invention as specified in claim 27.

(4) regarding claim 28:

Hewitt and Hattori disclose most of the subject matter as described as above except for specifically teaching wherein the print engine control commands are operable to control the print engine to reduce edges.

However, Roylance discloses wherein the print engine control commands are operable to control the print engine to reduce edges (**paragraph [0009], lines 1-6; note that these enhancement techniques include: edge smoothing, fine line broadening, anti-aliasing (to smooth jagged edges), and increasing resolution).**

Hewitt and Hattori and Roylance are combinable because they are from the same field of endeavor i.e. Multi-level image reproduction (e.g., gray level reproduction). At the time of the invention, it would have been obvious to a person of ordinary skilled in the art wherein the print engine control commands are operable to control the print engine to reduce edges. The suggestion/motivation for doing so would have been in order to enhance image processing techniques including resolution enhancement for improving the quality of text and line art, halftone image enhancement for improving the quality of gray value or halftone images and toner conservation for reducing toner consumption (paragraph [0022], lines 3-9). Therefore, it would have been obvious to combine Hewitt and Hattori with Roylance to obtain the invention as specified in claim 28.

(5) regarding claim 29:

Hewitt and Hattori disclose most of the subject matter as described as above except for specifically teaching wherein the interim data contains all information necessary for the printing device to produce the hardcopy image with the same detail contained in the page data.

However, Roylance discloses wherein the interim data contains all information necessary for the printing device to produce the hardcopy image with the same detail contained in the page data (**paragraph [0023], lines 9-14; note the regions in the complex bitmap image suitable for processing by one or more of the plurality of image enhancement procedures, selectively applying one or more of the plurality**

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of image enhancement procedures to the identified regions to enhance a raster image of the complex bitmap image, and printing the enhanced raster image).

Hewitt, Hattori and Roylance are combinable because they are from the same field of endeavor i.e. Multi-level image reproduction (e.g., gray level reproduction). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to wherein the interim data contains all information necessary for the printing device to produce the hardcopy image with the same detail contained in the page data. The suggestion/motivation for doing so would have been in order to enhance image processing techniques including resolution enhancement for improving the quality of text and line art, halftone image enhancement for improving the quality of gray value or halftone images and toner conservation for reducing toner consumption (paragraph [0022], lines 3-9). Therefore, it would have been obvious to combine Hewitt and Hattori with Roylance to obtain the invention as specified in claim 29.

6. The proposed combination of Hewitt, Hattori and Roylance, explained in the rejection of system claims 23 and 26-29, renders obvious the steps of the method of claims 17, 19-22 because these steps occur in the operation of the proposed combination as discussed above. Thus, the arguments similar to that presented above for claims 23 and 26-29 are equally applicable to claims 17, 19-22.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hewitt (US Patent Number 7,016,061 B1), Hattori (US Patent Number 6,369,911 B1),

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Roylance (US Publication Number 2002/0067509 A1) and further in view of Chamzas et al. (US Patent Number 5,031,053).

(1) regarding claim 24:

Hewitt, Hattori and Roylance disclosed most of the subject matter as described as above except for specifically teaching wherein the print data processor utilizes a lookup table to generate the interim data.

However, Chamzas et al. disclosed wherein the print data processor utilizes a lookup table to generate the interim data (**figure 5, column 7, lines 20-25, note that a table depicting a so-called group pixel assignment and super pixel assignment is disclosed**).

Hewitt, Hattori, Roylance and Chamzas et al. are combinable because they are from the same field of endeavor i.e. Multi-level image reproduction (e.g., gray level reproduction). At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to wherein the print data processor utilizes a lookup table to generate the interim data. The suggestion/motivation for doing so would have been in order to efficiently transmit and encode/decode image column 1, lines 13-15. Therefore, it would have been obvious to combine Hewitt and Hattori with Roylance to obtain the invention as specified in claim 24.

8. Claims 18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hewitt (US Patent Number 7,016,061 B1), Hattori (US Patent Number 6,369,911

B1) and Roylance (US Publication Number 2002/0067509 A1) further in view of Gibson (US Patent Number 5,828,361).

(1) regarding claim 25:

Hewitt and Hattori with Roylance disclose all of the subject matter as described as above except for specifically teaching wherein the host machine is a personal computer configured to display the page data having the first bit rate.

However, Gibson disclose wherein the host machine is a personal computer configured to display the page data having the first bit rate (**column 4, line 61-column 5, line 7; note that the generated single bit per pixel raster data structure is displayed in the display**).

Hewitt, Hattori, Roylance and Gibson are combinable because they are from the same field of endeavor i.e. Multi-level image reproduction (e.g., gray level reproduction). At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to wherein the host machine is a personal computer configured to display the page data having the first bit rate. The suggestion/motivation for doing so would have been in order to enhance image processing techniques including rapid transmission of multicolor or gray scale display data (abstract, lines 1-3). Therefore, it would have been obvious to combine Hewitt and Hattori with Roylance to obtain the invention as specified in claim 25.

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9. The proposed combination of Hewitt, Hattori, Roylance and Gibson, explained in the rejection of system claim 25, renders obvious the steps of the method of claim 18 because these steps occur in the operation of the proposed combination as discussed above. Thus, the arguments similar to that presented above for claim 25 is equally applicable to claim 18.

10. Claims 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hewitt (US Patent Number 7,016,061 B1) in view of Roylance (US Publication Number 2002/0067509 A1).

(1) regarding claim 30:

Hewitt disclose a printing method using a host machine utilizing at least one processor, and a printing device (**12, 14, figure 1, column 4, lines 24-27; note that a printing system 10 including a host computer 12 coupled to one or more imaging devices 14 via a communication link 16 is disclosed**), the printing method comprising:

generating page data having a first bit rate per plane per pixel from a first application running on a host machine utilizing the at least one processor (**column 4, lines 55-57; note that print jobs are originated in an application program resident on host computer 12 i.e. word as explained in figure 3**);

examining the page data in groups of at least two adjacent pixels by use of a second application running on the host machine utilizing the at least one processor **(column 4, lines 59-62; note that host computer 12 also includes one or more printer drivers for converting the print job data file to a page description language (PDL) file);**

rendering, by the host machine utilizing the at least one processor, printer ready data based on the examination of the page data **(column 4, lines 62-65; note that a formatter or RIP engine 22 including all the necessary hardware and firmware required to convert a print job PDL file to a hardware ready bits (HRB) file);** the second bit rate being lower than the first bit rate **(column 5, lines 34-39; note that the PDL file is passed to the RIP engine to be processed i.e. the bit rate is lower than the PDL data see column 6, lines 30-40);**

compressing, using a compression algorithm, the interim data in the host machine utilizing the at least one processor **(column 6, lines 50-53; note that image data is compressed after it is rasterized);** and

transferring the compressed interim data to a printing device **(column 5, lines 34-39; note that the print job PDL file is passed to the RIP engine 22, processed and then transmitted directly to the print engine 26 via I/O communication channels 20).**

Hewitt disclosed most of the subject matter as described as above except for specifically teaching combining, by the host machine utilizing the at least one processor,

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the printer ready data with print engine control commands operable to control a print engine to create interim data having a second bit rate per plane per pixel.

However, Roylance discloses combining, by the host machine utilizing the at least one processor, the printer ready data with print engine control commands operable to control a print engine to create interim data having a second bit rate per plane per pixel (**paragraph [0042], lines 6-13; note that the resolution enhancement procedure 122 of figure 1 takes control of the enhancement mode selection before the raster image is sent to the laser print engine i.e. the raster image also contains control information**).

Hewitt and Roylance are combinable because they are from the same field of endeavor i.e. Multi-level image reproduction (e.g., gray level reproduction). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to configure combining, by the host machine utilizing the at least one processor, the printer ready data with print engine control commands operable to control a print engine to create interim data having a second bit rate per plane per pixel. The suggestion/motivation for doing so would have been in order to enhance image processing techniques including resolution enhancement for improving the quality of text and line art, halftone image enhancement for improving the quality of gray value or halftone images and toner conservation for reducing toner consumption (paragraph [0022], lines 3-9). Therefore, it would have been obvious to combine Hewitt with Roylance to obtain the invention as specified in claim 30.

(2) regarding claim 31:

Hewitt disclose most of the subject matter as described as above except for specifically teaching wherein the print engine control commands in the host machine control one or more print enhancement selected from the group consisting of toner miser mode, toner explosion correction, and edge reduction.

However, Roylance discloses wherein the print engine control commands in the host machine control one or more print enhancement selected from the group consisting of toner miser mode, toner explosion correction, and edge reduction (**paragraph [0007], lines 14-18 and [0008], 1-8; note that the toner that is adhered to the discharged areas is then transferred to the media and fixed in a conventionally known manner**).

Hewitt and Roylance are combinable because they are from the same field of endeavor i.e. Multi-level image reproduction (e.g., gray level reproduction). At the time of the invention, it would have been obvious to a person of ordinary skilled in the art wherein the print engine control commands in the host machine control one or more print enhancement selected from the group consisting of toner miser mode, toner explosion correction, and edge reduction. The suggestion/motivation for doing so would have been in order to enhance image processing techniques including resolution enhancement for improving the quality of text and line art, halftone image enhancement for improving the quality of gray value or halftone images and toner conservation for reducing toner consumption (paragraph [0022], lines 3-9). Therefore, it would have

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been obvious to combine Hewitt with Roylance to obtain the invention as specified in claim 31.

11. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hewitt (US Patent Number 7,016,061 B1), Roylance (US Publication Number 2002/0067509 A1) and further in view of Hattori (US Patent Number 6,369,911 B1).

(1) regarding claim 36:

Hewitt and Roylance disclose most of the subject matter as described as above except for specifically teaching wherein the pulse code contains pulse width information and pulse position information, wherein the pulse position information is selected from the group consisting of left-justified, right-justified, center-justified, and split-justified.

However, Hattori disclosed wherein the pulse code contains pulse width information and pulse position information, wherein the pulse position information is selected from the group consisting of left-justified, right-justified, center-justified, and split-justified (**column 4, lines 20-26; note that reading starts at pixel P00 at the left-hand end of the uppermost line, and then pixels P10, P20, P30, . . . , on the uppermost line are sequentially read**).

Hewitt, Roylance and Hattori are combinable because they are from the same field of endeavor i.e. processing data for outputting device. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art wherein the pulse

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code contains pulse width information and pulse position information, wherein the pulse position information is selected from the group consisting of left-justified, right-justified, center-justified, and split-justified. The suggestion/motivation for doing so would have been to enhance the resolution of an image so that the number of the gray scale levels, which can be expressed, is reduced in inverse proportion to the resolution of the image required to be printed (column 1, lines 14-22). Therefore, it would have been obvious to combine Hewitt, Roylance and Hattori to obtain the invention as specified in claim 36.

12. Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hewitt (US Patent Number 7,016,061 B1), Roylance (US Publication Number 2002/0067509 A1), Hattori (US Patent Number 6,369,911 B1) and further in view of Vondran, Jr. et al. (US Patent Number 5,915,079).

(1) regarding claim 32:

Hewitt and Roylance disclosed all of the subject matter as described as above except for specifically teaching decompressing the compressed interim data in the printing device; generating, within the printing device, pulse codes from the decompressed interim data; and rendering a hardcopy image from the pulse codes.

However, Hattori disclosed generating, within the printing device, pulse codes from the decompressed interim data (**column 3, lines 41-50; note that the pulse generator receives the image data and generates the address data for the pixels**); and rendering a hardcopy image from the pulse codes (**column 3, lines 56-60; note**

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that after the pulse generator generates the pulse codes, it is transmitted to the print engine to be outputted).

Hewitt, Roylance and Hattori are combinable because they are from the same field of endeavor i.e. processing data for outputting device. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to generate, within the printing device, pulse codes from the decompressed interim data; and rendering a hardcopy image from the pulse codes. The suggestion/motivation for doing so would have been to enhance the resolution of an image so that the number of the gray scale levels, which can be expressed, is reduced in inverse proportion to the resolution of the image required to be printed (column 1, lines 14-22). Therefore, it would have been obvious to combine Hewitt, Roylance and Hattori to obtain the invention as specified in claim 32.

Also, Vondran disclosed decompressing the compressed interim data in the printing device (**column 14, lines 54-57; note that after decompression the merge plane and the halftone plane are extracted from the stream of decompressed lossless print data**).

Hewitt, Roylance, Hattori and Vondran are combinable because they are from the same field of endeavor i.e. processing data for outputting device. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to decompress the compressed interim data in the printing device. The suggestion/motivation for doing so would have been to in order to perform a multitude of permutations of print data processing operations optimized for the print data (Abstract,

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lines 28-32). Therefore, it would have been obvious to combine Hewitt, Roylance, Hattori and Vondran to obtain the invention as specified in claim 32.

(2) regarding claim 33:

Hewitt, Hattori and Roylance disclosed all of the subject matter as described as above except for specifically teaching wherein the compression algorithm comprises JBIG.

However, Vondran disclosed wherein the compression algorithm comprises JBIG **(column 14, lines 40-41; note that the lossless compressed/JBIG raster print data is expressed in a RGB color space).**

Hewitt, Roylance, Hattori and Vondran are combinable because they are from the same field of endeavor i.e. processing data for outputting device. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to have the compression algorithm comprises JBIG. The suggestion/motivation for doing so would have been to in order to perform a multitude of permutations of print data processing operations optimized for the print data (Abstract, lines 28-32). Therefore, it would have been obvious to combine Hewitt, Roylance, Hattori and Vondran to obtain the invention as specified in claim 33.

(3) regarding claim 34:

Hewitt, Hattori and Roylance disclosed all of the subject matter as described as above except for specifically teaching wherein the compression algorithm comprises JPEG.

However, Vondran disclosed wherein the compression algorithm comprises JPEG (**column 14, lines 38-40; note that the lossy compressed/JPEG raster print data is expressed in a YCbCr color space**).

Hewitt, Roylance, Hattori and Vondran are combinable because they are from the same field of endeavor i.e. processing data for outputting device. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to wherein the compression algorithm comprises JPEG. The suggestion/motivation for doing so would have been to in order to perform a multitude of permutations of print data processing operations optimized for the print data (Abstract, lines 28-32). Therefore, it would have been obvious to combine Hewitt, Roylance, Hattori and Vondran to obtain the invention as specified in claim 34.

13. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hewitt (US Patent Number 7,016,061 B1) and Roylance (US Publication Number 2002/0067509 A1), and further in view of Vondran, Jr. et al. (US Patent Number 5,915,079).

(1) regarding claim 35:

Hewitt further disclosed the printing method of claim 30,
wherein the host device includes image processing (**column 4, lines 62-65;**
column 4, lines 62-65; note that a formatter or RIP engine 22 including all the
necessary hardware and firmware required to convert a print job PDL file to a
hardware ready bits (HRB) file) and the printing device does not include image
processing (**column 5, lines 15-17; note that the processed data is directed sent to**
the print engine without additional process by the printer).

Hewitt and Roylance disclosed all of the subject matter as described as above
except for specifically teaching decompressing, using the compression algorithm, the
compressed interim data in the printer device.

However, Vondran disclosed decompressing, using the compressed interim data
in the printing device (**column 14, lines 54-57; note that after decompression the**
merge plane and the halftone plane are extracted from the stream of
decompressed lossless print data).

Hewitt, Roylance and Vondran are combinable because they are from the same
field of endeavor i.e. processing data for outputting device. At the time of the invention,
it would have been obvious to a person of ordinary skilled in the art to decompress the
compressed interim data in the printing device. The suggestion/motivation for doing so
would have been to in order to perform a multitude of permutations of print data
processing operations optimized for the print data (Abstract, lines 28-32). Therefore, it

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would have been obvious to combine Hewitt, Roylance with Vondran to obtain the invention as specified in claim 35.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kolb et al. (US Patent Number 5,526,468) disclosed a method and apparatus for smoothing an expandable bitmap for two-state image data.

Ando (US Patent Number 6,384,930 B1) disclosed a printer control circuit, printer and print system.

15. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Hilina Kassa whose telephone number is (571) 270-1676.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore could be reached at (571) 272- 7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pari-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hilina S Kassa/

Examiner, Art Unit 2625

December 10, 2010